

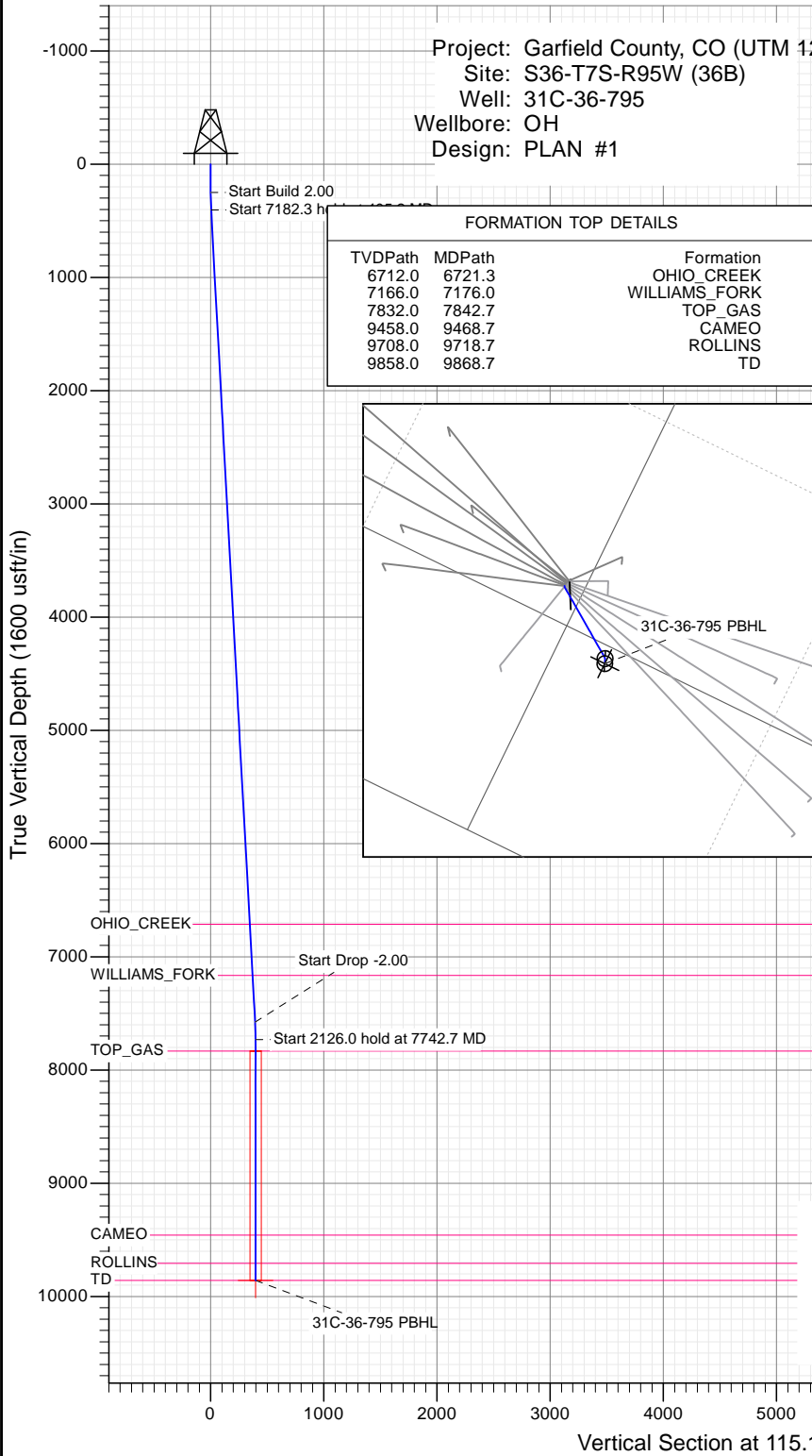


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	
3	405.2	3.10	115.12	405.1	-1.8	3.8	2.00	115.12	4.2	
4	7587.5	3.10	115.12	7576.9	-166.9	359.9	0.00	0.00	393.1	
5	7742.7	0.00	0.00	7732.0	-168.7	359.7	2.00	180.00	397.3	
6	9868.7	0.00	0.00	9858.0	-168.7	359.7	0.00	0.00	397.3	31C-36-795 PBHL

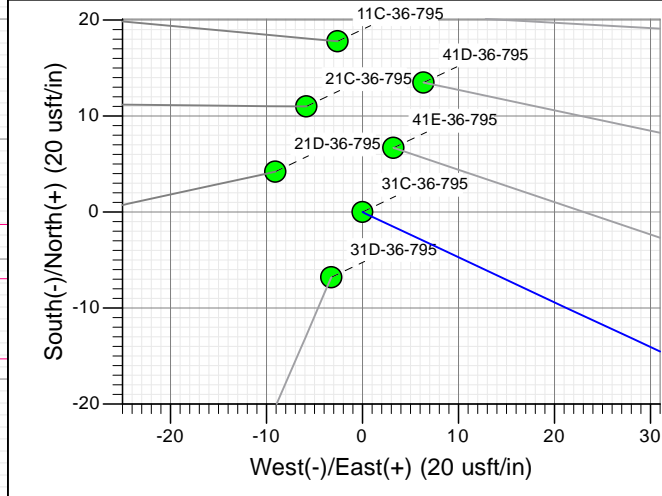
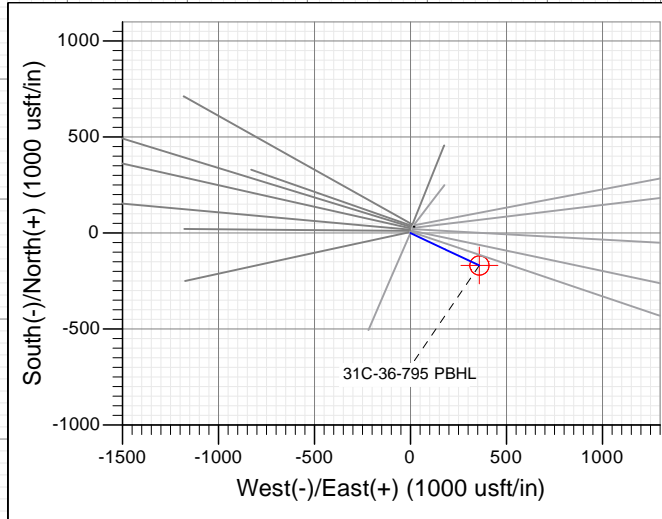
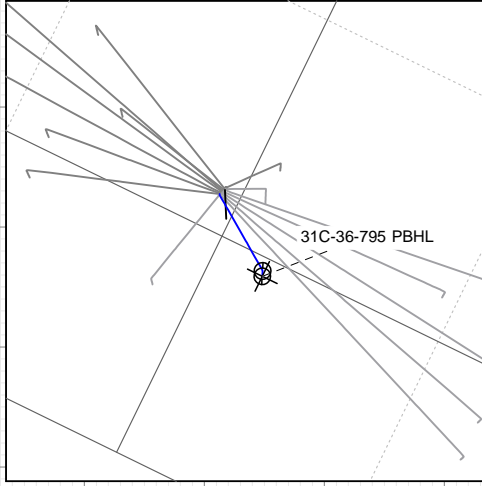
Project: Garfield County, CO (UTM 12
 Site: S36-T7S-R95W (36B)
 Well: 31C-36-795
 Wellbore: OH
 Design: PLAN #1

Name	Type TD	Target No Target (Freehand)	Azimuth	Origin Type Slot	N/S	E/W	From TVD	Latitude	Longitude
31C-36-795 PBHL			115.12		0.0	0.0	0.0	39.397628	-107.942115



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
6712.0	6721.3	OHIO_CREEK
7166.0	7176.0	WILLIAMS_FORK
7832.0	7842.7	TOP_GAS
9458.0	9468.7	CAMEO
9708.0	9718.7	ROLLINS
9858.0	9868.7	TD



T M
 Azimuths to True North
 Magnetic North: 9.42°
 Magnetic Field
 Strength: 51880.5snT
 Dip Angle: 65.62°
 Date: 12/17/2015
 Model: HDGM

CASING DETAILS

No casing data is available



WELL DETAILS: 31C-36-795

+N/-S	+E/-W	Northing	Ground Level:	8684.0	Latitude	Longitude
0.0	0.0	14321508.40	Easting	2503995.10	39.398091	-107.943387



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 31C-36-795
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8714.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8714.0usft
Site:	S36-T7S-R95W (36B)	North Reference:	True
Well:	31C-36-795	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	S36-T7S-R95W (36B)				
Site Position:		Northing:	14,321,539.90 usft	Latitude:	39.398177
From:	Map	Easting:	2,503,997.80 usft	Longitude:	-107.943374
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	1.94 °

Well	31C-36-795					
Well Position	+N/-S	0.0 usft	Northing:	14,321,508.40 usft	Latitude:	39.398091
	+E/-W	0.0 usft	Easting:	2,503,995.10 usft	Longitude:	-107.943387
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,684.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	12/17/2015	9.42	65.62	51,881

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	115.12

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
405.2	3.10	115.12	405.1	-1.8	3.8	2.00	2.00	0.00	115.12	
7,587.5	3.10	115.12	7,576.9	-166.9	355.9	0.00	0.00	0.00	0.00	
7,742.7	0.00	0.00	7,732.0	-168.7	359.7	2.00	-2.00	0.00	180.00	
9,868.7	0.00	0.00	9,858.0	-168.7	359.7	0.00	0.00	0.00	0.00	31C-36-795 PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 31C-36-795
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8714.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8714.0usft
Site:	S36-T7S-R95W (36B)	North Reference:	True
Well:	31C-36-795	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
300.0	1.00	115.12	300.0	-0.2	0.4	0.4	2.00	2.00	
400.0	3.00	115.12	399.9	-1.7	3.6	3.9	2.00	2.00	
405.2	3.10	115.12	405.1	-1.8	3.8	4.2	2.00	2.00	Start 7182.3 hold at 405.2 MD
500.0	3.10	115.12	499.8	-4.0	8.5	9.3	0.00	0.00	
600.0	3.10	115.12	599.6	-6.3	13.4	14.8	0.00	0.00	
700.0	3.10	115.12	699.5	-8.6	18.3	20.2	0.00	0.00	
800.0	3.10	115.12	799.3	-10.9	23.2	25.6	0.00	0.00	
900.0	3.10	115.12	899.2	-13.2	28.1	31.0	0.00	0.00	
1,000.0	3.10	115.12	999.0	-15.5	33.0	36.4	0.00	0.00	
1,100.0	3.10	115.12	1,098.9	-17.8	37.9	41.8	0.00	0.00	
1,200.0	3.10	115.12	1,198.8	-20.1	42.8	47.2	0.00	0.00	
1,300.0	3.10	115.12	1,298.6	-22.4	47.7	52.7	0.00	0.00	
1,400.0	3.10	115.12	1,398.5	-24.7	52.6	58.1	0.00	0.00	
1,500.0	3.10	115.12	1,498.3	-27.0	57.5	63.5	0.00	0.00	
1,600.0	3.10	115.12	1,598.2	-29.3	62.4	68.9	0.00	0.00	
1,700.0	3.10	115.12	1,698.0	-31.6	67.3	74.3	0.00	0.00	
1,800.0	3.10	115.12	1,797.9	-33.8	72.2	79.7	0.00	0.00	
1,900.0	3.10	115.12	1,897.7	-36.1	77.1	85.1	0.00	0.00	
2,000.0	3.10	115.12	1,997.6	-38.4	82.0	90.6	0.00	0.00	
2,100.0	3.10	115.12	2,097.4	-40.7	86.9	96.0	0.00	0.00	
2,200.0	3.10	115.12	2,197.3	-43.0	91.8	101.4	0.00	0.00	
2,300.0	3.10	115.12	2,297.1	-45.3	96.7	106.8	0.00	0.00	
2,400.0	3.10	115.12	2,397.0	-47.6	101.6	112.2	0.00	0.00	
2,500.0	3.10	115.12	2,496.8	-49.9	106.5	117.6	0.00	0.00	
2,600.0	3.10	115.12	2,596.7	-52.2	111.4	123.0	0.00	0.00	
2,700.0	3.10	115.12	2,696.6	-54.5	116.3	128.5	0.00	0.00	
2,800.0	3.10	115.12	2,796.4	-56.8	121.2	133.9	0.00	0.00	
2,900.0	3.10	115.12	2,896.3	-59.1	126.1	139.3	0.00	0.00	
3,000.0	3.10	115.12	2,996.1	-61.4	131.0	144.7	0.00	0.00	
3,100.0	3.10	115.12	3,096.0	-63.7	135.9	150.1	0.00	0.00	
3,200.0	3.10	115.12	3,195.8	-66.0	140.8	155.5	0.00	0.00	
3,300.0	3.10	115.12	3,295.7	-68.3	145.7	160.9	0.00	0.00	
3,400.0	3.10	115.12	3,395.5	-70.6	150.6	166.4	0.00	0.00	
3,500.0	3.10	115.12	3,495.4	-72.9	155.5	171.8	0.00	0.00	
3,600.0	3.10	115.12	3,595.2	-75.2	160.4	177.2	0.00	0.00	
3,700.0	3.10	115.12	3,695.1	-77.5	165.3	182.6	0.00	0.00	
3,800.0	3.10	115.12	3,794.9	-79.8	170.2	188.0	0.00	0.00	
3,900.0	3.10	115.12	3,894.8	-82.1	175.1	193.4	0.00	0.00	
4,000.0	3.10	115.12	3,994.6	-84.4	180.0	198.8	0.00	0.00	
4,100.0	3.10	115.12	4,094.5	-86.7	184.9	204.3	0.00	0.00	
4,200.0	3.10	115.12	4,194.3	-89.0	189.8	209.7	0.00	0.00	
4,300.0	3.10	115.12	4,294.2	-91.3	194.7	215.1	0.00	0.00	
4,400.0	3.10	115.12	4,394.1	-93.6	199.6	220.5	0.00	0.00	
4,500.0	3.10	115.12	4,493.9	-95.9	204.5	225.9	0.00	0.00	
4,600.0	3.10	115.12	4,593.8	-98.2	209.4	231.3	0.00	0.00	
4,700.0	3.10	115.12	4,693.6	-100.5	214.3	236.7	0.00	0.00	
4,800.0	3.10	115.12	4,793.5	-102.8	219.2	242.2	0.00	0.00	
4,900.0	3.10	115.12	4,893.3	-105.1	224.1	247.6	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 31C-36-795
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8714.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8714.0usft
Site:	S36-T7S-R95W (36B)	North Reference:	True
Well:	31C-36-795	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
5,000.0	3.10	115.12	4,993.2	-107.4	229.0	253.0	0.00	0.00	
5,100.0	3.10	115.12	5,093.0	-109.7	233.9	258.4	0.00	0.00	
5,200.0	3.10	115.12	5,192.9	-112.0	238.8	263.8	0.00	0.00	
5,300.0	3.10	115.12	5,292.7	-114.3	243.8	269.2	0.00	0.00	
5,400.0	3.10	115.12	5,392.6	-116.6	248.7	274.6	0.00	0.00	
5,500.0	3.10	115.12	5,492.4	-118.9	253.6	280.1	0.00	0.00	
5,600.0	3.10	115.12	5,592.3	-121.2	258.5	285.5	0.00	0.00	
5,700.0	3.10	115.12	5,692.1	-123.5	263.4	290.9	0.00	0.00	
5,800.0	3.10	115.12	5,792.0	-125.8	268.3	296.3	0.00	0.00	
5,900.0	3.10	115.12	5,891.9	-128.1	273.2	301.7	0.00	0.00	
6,000.0	3.10	115.12	5,991.7	-130.4	278.1	307.1	0.00	0.00	
6,100.0	3.10	115.12	6,091.6	-132.7	283.0	312.5	0.00	0.00	
6,200.0	3.10	115.12	6,191.4	-135.0	287.9	318.0	0.00	0.00	
6,300.0	3.10	115.12	6,291.3	-137.3	292.8	323.4	0.00	0.00	
6,400.0	3.10	115.12	6,391.1	-139.6	297.7	328.8	0.00	0.00	
6,500.0	3.10	115.12	6,491.0	-141.9	302.6	334.2	0.00	0.00	
6,600.0	3.10	115.12	6,590.8	-144.2	307.5	339.6	0.00	0.00	
6,700.0	3.10	115.12	6,690.7	-146.5	312.4	345.0	0.00	0.00	
6,721.3	3.10	115.12	6,712.0	-147.0	313.4	346.2	0.00	0.00	OHIO_CREEK
6,800.0	3.10	115.12	6,790.5	-148.8	317.3	350.4	0.00	0.00	
6,900.0	3.10	115.12	6,890.4	-151.1	322.2	355.9	0.00	0.00	
7,000.0	3.10	115.12	6,990.2	-153.4	327.1	361.3	0.00	0.00	
7,100.0	3.10	115.12	7,090.1	-155.7	332.0	366.7	0.00	0.00	
7,176.0	3.10	115.12	7,166.0	-157.4	335.7	370.8	0.00	0.00	WILLIAMS_FORK
7,200.0	3.10	115.12	7,189.9	-158.0	336.9	372.1	0.00	0.00	
7,300.0	3.10	115.12	7,289.8	-160.3	341.8	377.5	0.00	0.00	
7,400.0	3.10	115.12	7,389.6	-162.6	346.7	382.9	0.00	0.00	
7,500.0	3.10	115.12	7,489.5	-164.9	351.6	388.3	0.00	0.00	
7,587.5	3.10	115.12	7,576.9	-166.9	355.9	393.1	0.00	0.00	Start Drop -2.00
7,600.0	2.85	115.12	7,589.4	-167.2	356.5	393.7	2.00	-2.00	
7,700.0	0.85	115.12	7,689.3	-168.5	359.4	397.0	2.00	-2.00	
7,742.7	0.00	0.00	7,732.0	-168.7	359.7	397.3	2.00	-2.00	Start 2126.0 hold at 7742.7 MD
7,800.0	0.00	0.00	7,789.3	-168.7	359.7	397.3	0.00	0.00	
7,842.7	0.00	0.00	7,832.0	-168.7	359.7	397.3	0.00	0.00	TOP_GAS
7,900.0	0.00	0.00	7,889.3	-168.7	359.7	397.3	0.00	0.00	
8,000.0	0.00	0.00	7,989.3	-168.7	359.7	397.3	0.00	0.00	
8,100.0	0.00	0.00	8,089.3	-168.7	359.7	397.3	0.00	0.00	
8,200.0	0.00	0.00	8,189.3	-168.7	359.7	397.3	0.00	0.00	
8,300.0	0.00	0.00	8,289.3	-168.7	359.7	397.3	0.00	0.00	
8,400.0	0.00	0.00	8,389.3	-168.7	359.7	397.3	0.00	0.00	
8,500.0	0.00	0.00	8,489.3	-168.7	359.7	397.3	0.00	0.00	
8,600.0	0.00	0.00	8,589.3	-168.7	359.7	397.3	0.00	0.00	
8,700.0	0.00	0.00	8,689.3	-168.7	359.7	397.3	0.00	0.00	
8,800.0	0.00	0.00	8,789.3	-168.7	359.7	397.3	0.00	0.00	
8,900.0	0.00	0.00	8,889.3	-168.7	359.7	397.3	0.00	0.00	
9,000.0	0.00	0.00	8,989.3	-168.7	359.7	397.3	0.00	0.00	
9,100.0	0.00	0.00	9,089.3	-168.7	359.7	397.3	0.00	0.00	
9,200.0	0.00	0.00	9,189.3	-168.7	359.7	397.3	0.00	0.00	
9,300.0	0.00	0.00	9,289.3	-168.7	359.7	397.3	0.00	0.00	
9,400.0	0.00	0.00	9,389.3	-168.7	359.7	397.3	0.00	0.00	
9,468.7	0.00	0.00	9,458.0	-168.7	359.7	397.3	0.00	0.00	CAMEO
9,500.0	0.00	0.00	9,489.3	-168.7	359.7	397.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 31C-36-795
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8714.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8714.0usft
Site:	S36-T7S-R95W (36B)	North Reference:	True
Well:	31C-36-795	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,600.0	0.00	0.00	9,589.3	-168.7	359.7	397.3	0.00	0.00	
9,700.0	0.00	0.00	9,689.3	-168.7	359.7	397.3	0.00	0.00	
9,718.7	0.00	0.00	9,708.0	-168.7	359.7	397.3	0.00	0.00	ROLLINS
9,800.0	0.00	0.00	9,789.3	-168.7	359.7	397.3	0.00	0.00	
9,868.7	0.00	0.00	9,858.0	-168.7	359.7	397.3	0.00	0.00	TD at 9868.7 - TD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
31C-36-795 PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 50.0)	0.00	0.00	9,858.0	-168.7	359.7	14,321,352.00	2,504,360.30	39.397628	-107.942115

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,721.3	6,712.0	OHIO_CREEK				
7,176.0	7,166.0	WILLIAMS_FORK				
7,842.7	7,832.0	TOP_GAS				
9,468.7	9,458.0	CAMEO				
9,718.7	9,708.0	ROLLINS				
9,868.7	9,858.0	TD				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
250.0	250.0	0.0	0.0	Start Build 2.00
405.2	405.1	-1.8	3.8	Start 7182.3 hold at 405.2 MD
7,587.5	7,576.9	-166.9	355.9	Start Drop -2.00
7,742.7	7,732.0	-168.7	359.7	Start 2126.0 hold at 7742.7 MD
9,868.7	9,858.0	-168.7	359.7	TD at 9868.7